ECM-CX700

3.5" VIA CX700M Eden V4 ULV 1GHz Micro Module

Quick Installation Guide

5th Ed – 9 November 2011

To receive the latest version of the user's manual; please visit our Web site at:
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1. Getting Started

1.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Always note that improper disassembling action could cause damage to the motherboard. We suggest not removing the heatsink without correct instructions in any circumstance. If you really have to do this, please contact us for further support.

Caution!

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

Before you begin installing your single board, please make sure that the following materials have been shipped:

- 1 x ECM-CX700 VIA Eden V4 Micro module
- 1 x Quick Installation Guide for ECM-CX700
- 1 x DVD-ROM or CD-ROM contains the followings:
  - User's Manual (this manual in PDF file)
  - Ethernet driver and utilities
  - VGA drivers and utilities
  - Audio drivers and utilities
- 1 x Cable set contains the followings:
  - 1 x Daughter board support Audio/2 x USB (P/N:9697000105R)
  - 1 x IDE HDD cable (44-pin, pitch 2.0mm)
  - 1 x USB cable (10-pin/2.54mm-10pin/2.0mm)
  - 1 x Audio cable (12-pin, pitch 2.0mm)
  - 1 x Serial ATA cable (7-pin, standard)
  - 1 x Serial port cable (10-pin, pitch 2.0mm)
  - 1 x PS/2 Keyboard & Mouse Y cable (6-pin, Mini-DIN)

If any of the above items is damaged or missing, contact your retailer.

2. Hardware Configuration

Note:

For further product information, please visit our website:

http://www.avalue.com.tw

For further update information, please visit our technical support site:

http://www.avalue.com.tw/support

For further sales issue, please e-mail us:

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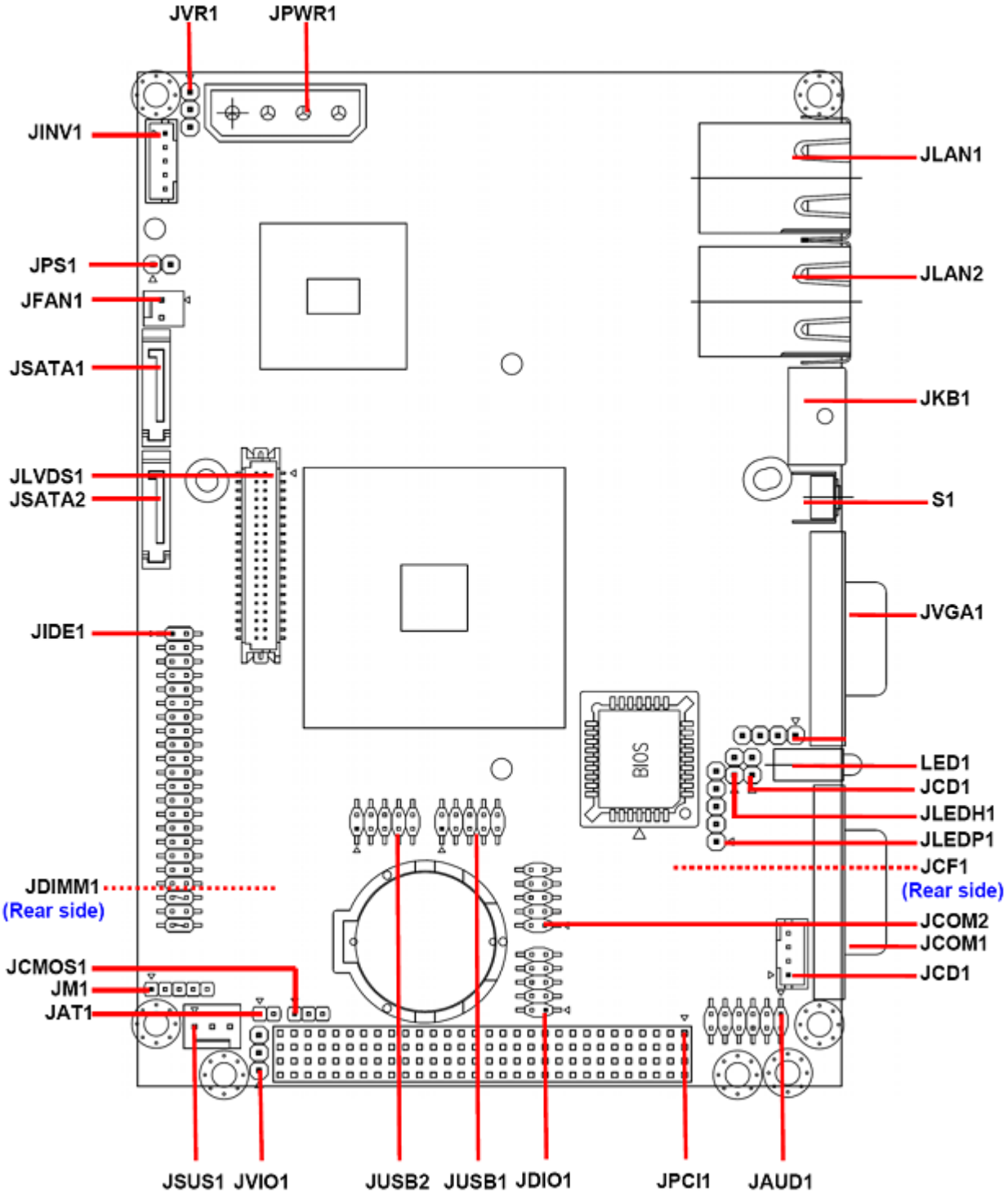
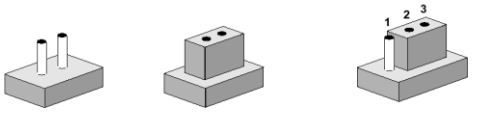
2.1 Product Overview



2.2 Jumper and Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip. To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



Open Closed Closed 2-3

The jumper settings are schematically depicted in this manual as follows:

Open Closed Closed 2-3

A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

The following tables list the function of each of the board's jumpers and connectors.

Jumpers

Label	Function	Note
JAT1	AT/ATX power select	2 x 1 header, pitch 2.00mm
JSUS1		3 x 1 header, pitch 2.54mm
JCMOS1	Clear CMOS	3 x 1 header, pitch 2.00mm
JVIO1	PCI 104 voltage select	3 x 2 header, pitch 2.54mm

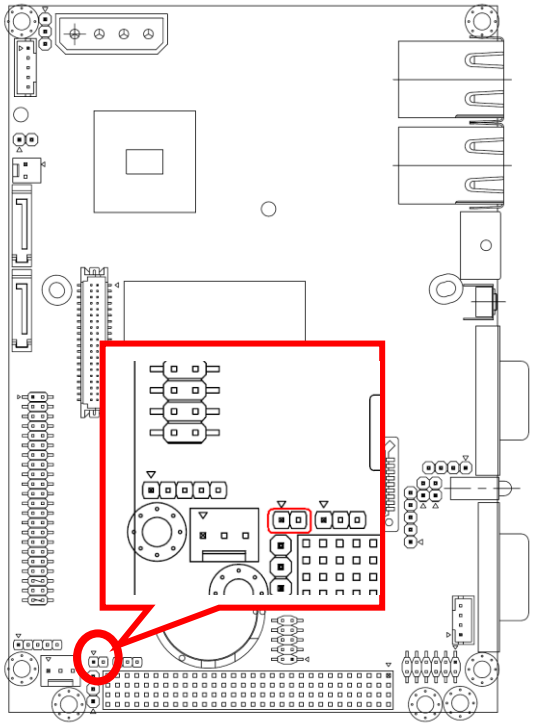
Connectors

Label	Function	Note
JAUD1	Audio connector	6 x 2 header, pitch 2.0mm
JCD1	CD-ROM audio input connector	4 x 1 wafer, pitch 2.0mm
JCF1	Compact Flash card connector	
JCOM1	Serial port 1 connector	5 x 2 header, pitch 2.0mm
JCOM2	Serial port 2 connector	5 x 2 header, pitch 2.0mm
JDIMM1	DDR2 SODIMM 1.8V	200-pin DDR2 SODIMM socket
JDIO1	General purpose I/O connector	5 x 2 header, pitch 2.0mm
JFAN1&2	CPU fan connector	2 x 1 wafer, pitch 2.54mm
JIDE1	Primary IDE connector	22 x 2 header, pitch 2.0mm
JINV1	LCD inverter connector	5 x 1 wafer, pitch 2.0mm
JIR1	IrDA connector	5 x 1 header, pitch 2.54mm
JKB1	PS/2 keyboard & mouse connector	6-pin mini DIN
JLAN1	RJ-45 Ethernet 1	
JLAN2	RJ-45 Ethernet 2	
JLEDP1	Power Indicator	2 x 1 header, pitch 2.54mm
JLEDH1	HDD Indicator	2 x 1 header, pitch 2.54mm
JLVDS1	LVDS connector	HIROSE DF13-40DP-1.25V
JM1	Lord Port (for Firmware updating only)	5 x 1 header, pitch 2.0mm
JPCI1	PCI-104 connector	5 x 2 header, pitch 2.0mm
JPS1	ATX power switch connector	2 x 1 header, pitch 2.54mm
JPWR1	Power connector	Wafer box 4P 5.08mm
JSATA1	Serial ATA connector 1 Floppy connector	Wafer 7P pitch 1.27mm
JSATA2	Serial ATA connector 2	Wafer 7P pitch 1.27mm
JUSB1	USB connector 0 & 1	5 x 2 header, pitch 2.0mm
JUSB2	USB connector 2 & 3	5 x 2 header, pitch 2.0mm
JVGA1	VGA connector	D-sub 15-pin, Female
JVR1	LCD backlight brightness adjustment	3 x 1 header, pitch 2.54mm
LED1	Power & HDD indicator	
S1	Reset button	

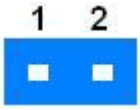
2.3 Setting Jumpers & Connectors

2.3.1 AT/ATX Power Select (JAT1, JSUS1)

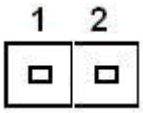
JAT1



AT*

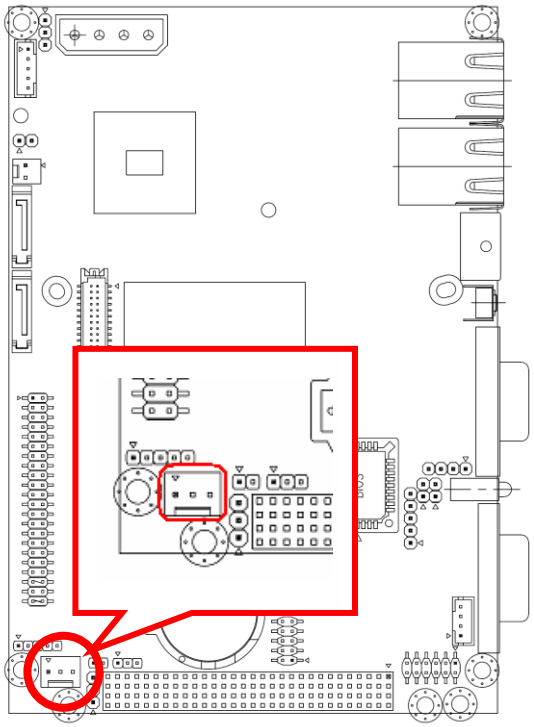


ATX



*** Default**

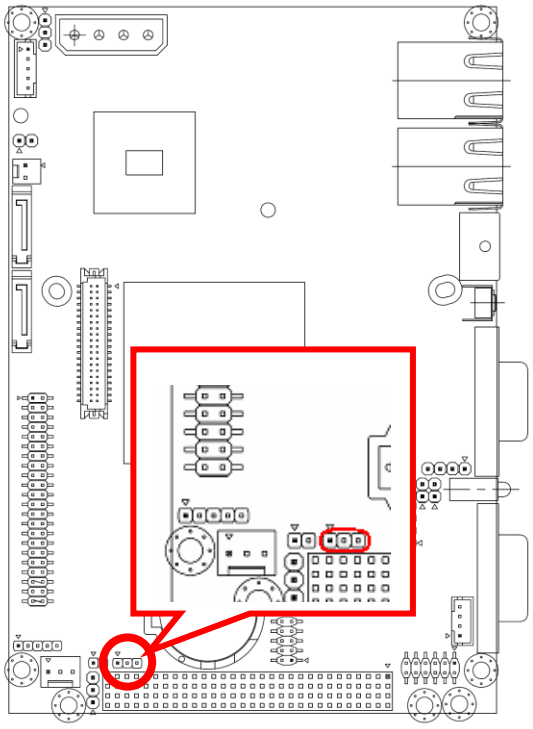
JSUS1

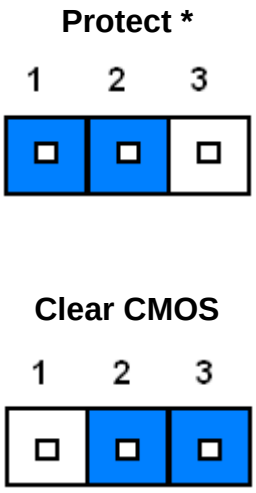


Signal	PIN
PWR_ON	1
+5V	2
VCCSB	3

Note: The default sets 2-3 closed for AT power used.

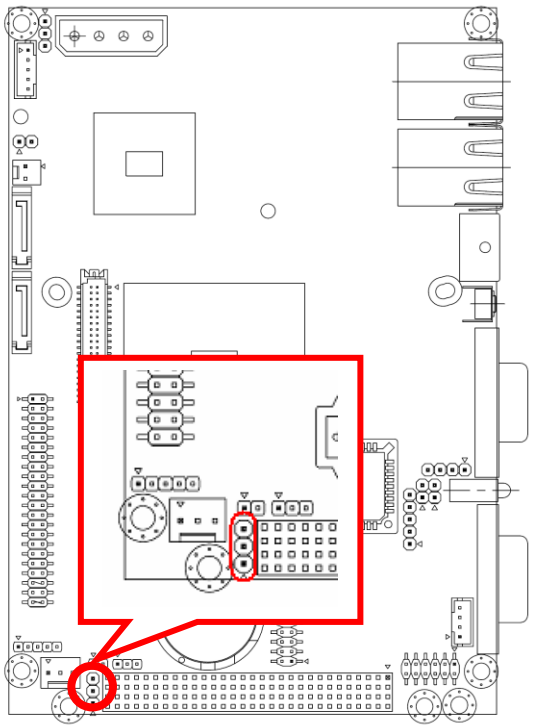
2.3.2 Clear CMOS (JCMOS1)





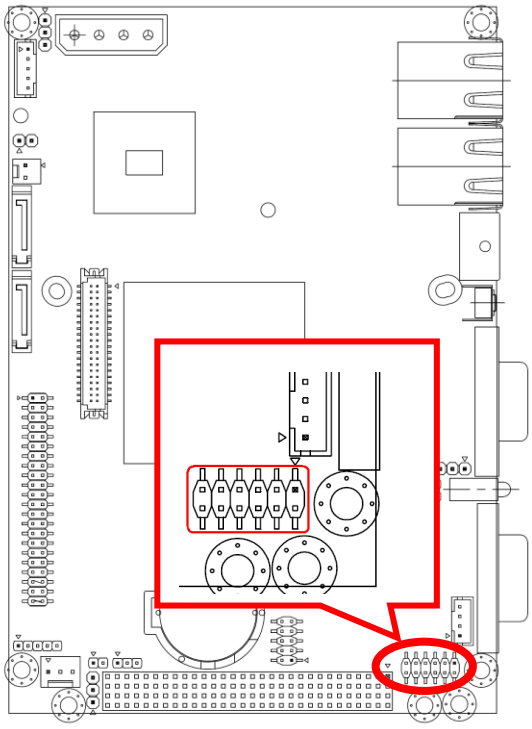
*** Default**

2.3.3 PCI-104 Voltage Select (JVIO1)



*** Default**

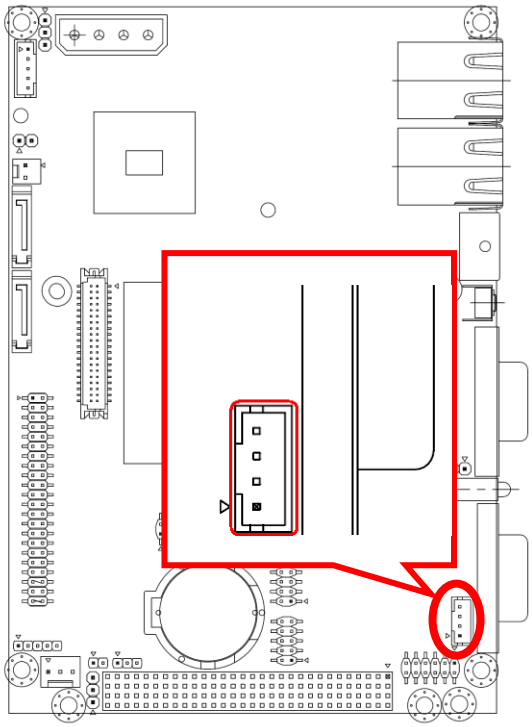
2.3.4 Audio connector (JAUD1)

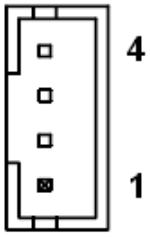


Signal	PIN	PIN	Signal
LINEOUT_R	1	2	LINEOUT _L
GND	3	4	LFE-OUT
LIN_R	5	6	LIN_L
MIC-IN	7	8	CEN-OUT
SURR-OUT-L	9	10	SURR-OUT-R
SPDIF OUT	11	12	GND

*** Default**

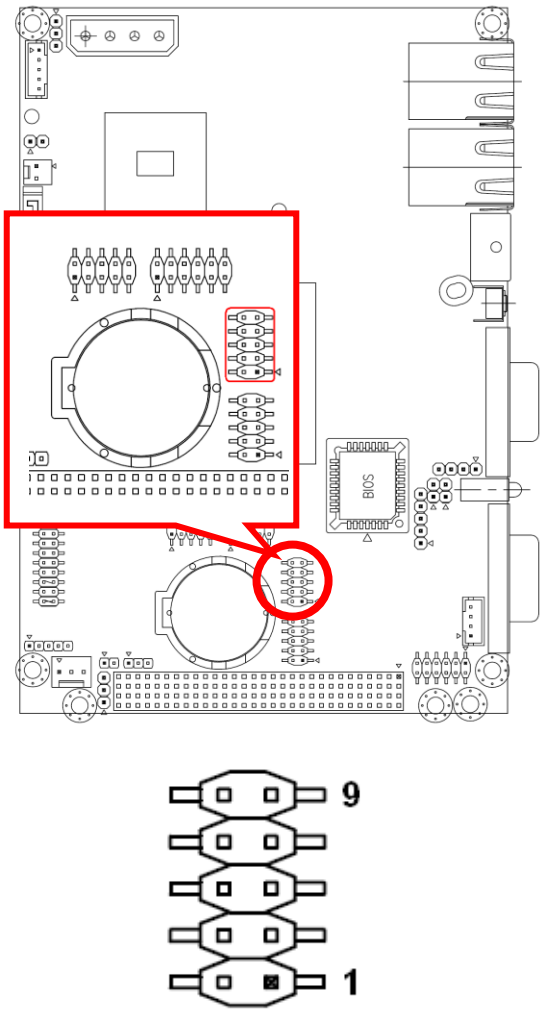
2.3.5 CD-ROM Audio Input Connector (JCD1)





Signal	PIN
CD_L	4
GND	3
CD_R	2
GND	1

2.3.6 Serial Port 2 Connector in RS-232/422/485 Mode (JCOM2)



RS-232 Mode

Signal	PIN	PIN	Signal
GND	10	9	RI
CTS	8	7	RTS
DSR	6	5	GND
DRT	4	3	TxD
RxD	2	1	DCD

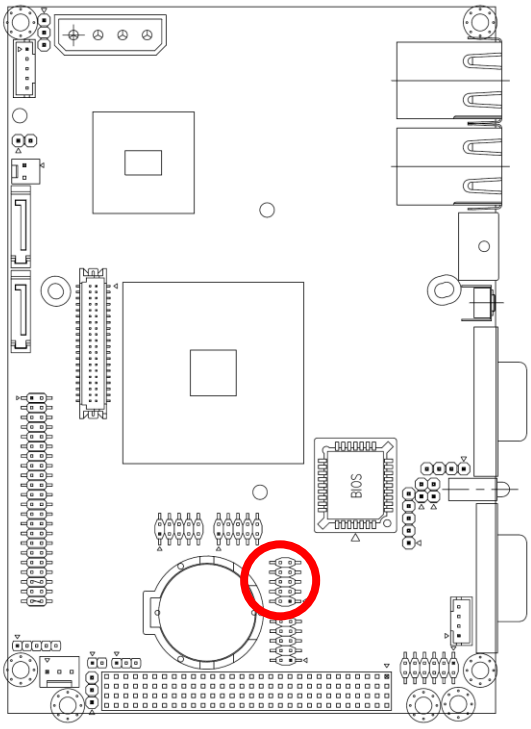
RS-422 Mode

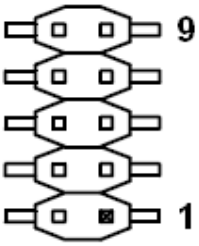
Signal	PIN	PIN	Signal
GND	10	9	GND
RxD-	8	7	NC
TxD+	6	5	GND
NC	4	3	NC
RxD+	2	1	TxD-

RS-485 Mode

Signal	PIN	PIN	Signal
GND	10	9	GND
NC	8	7	NC
DATA+	6	5	GND
NC	4	3	NC
NC	2	1	DATA-

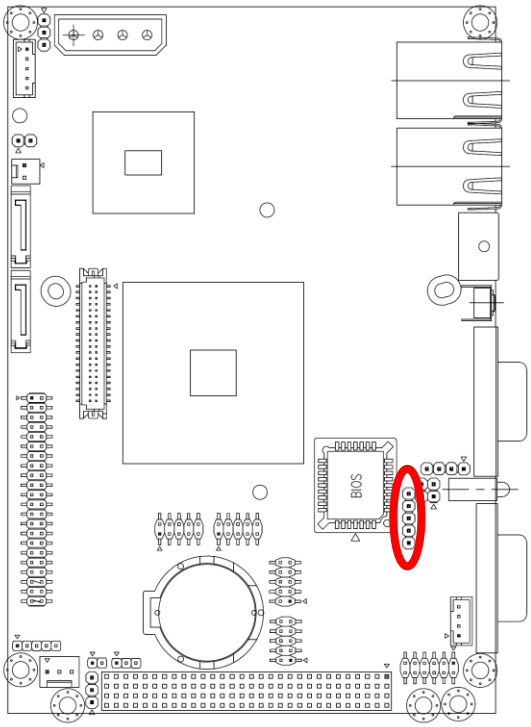
2.3.7 General Purpose I/O Connector (JDIO1)





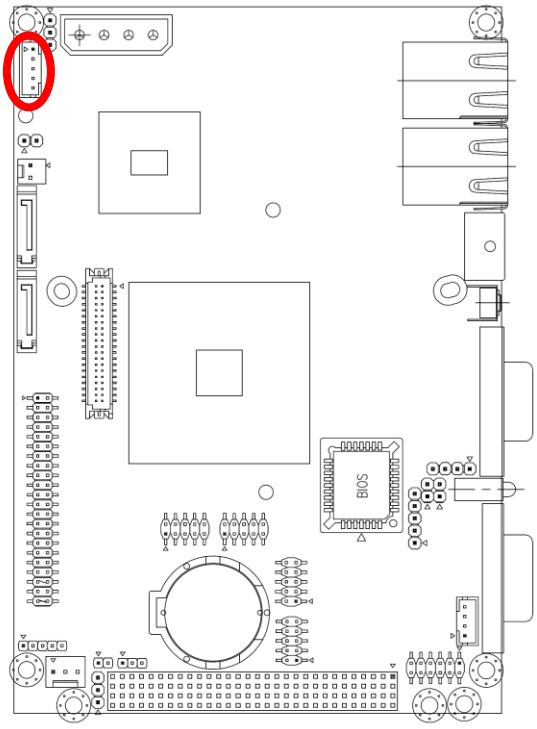
Signal	PIN	PIN	Signal
GND	10	9	+5V
GP17	8	7	GP13
GP16	6	5	GP12
GP15	4	3	GP11
GP14	2	1	GP10

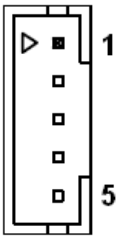
2.3.8 IrDA Connector (JIR1)



Signal	PIN
IRTX	5
GND	4
IRRX	3
NC	2
+5V	1

2.3.9 LCD Inverter Connector (JINV1)





Signal	PIN
+12V	1
GND	2
ENBKL	3
VR	4
+5V	5

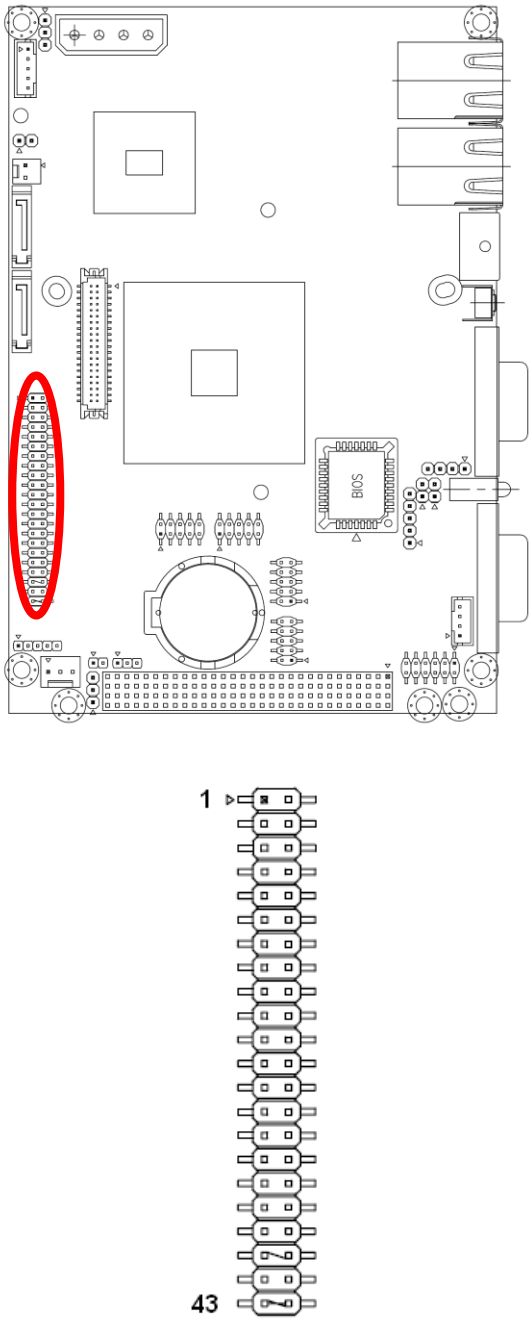
Note:

For inverters with adjustable Backlight function, it is possible to control the LCD brightness through the VR signal controlled by **VR1**. Please see the **VR1** section for detailed circuitry information.

2.3.9.1 Signal Description – LCD Inverter Connector (JINV1)

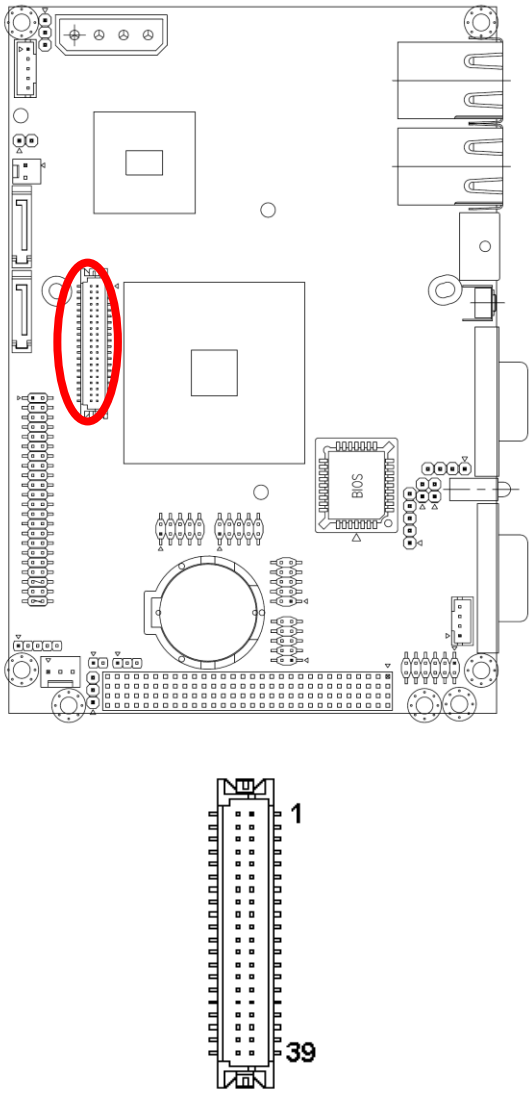
Signal	Signal Description
VR	Vadj = 0.75V ~ 4.25V (Recommended: 4.7KΩ, >1/16W)
ENBKL	LCD backlight ON/OFF control signal

2.3.10 IDE Connector (JIDE1)



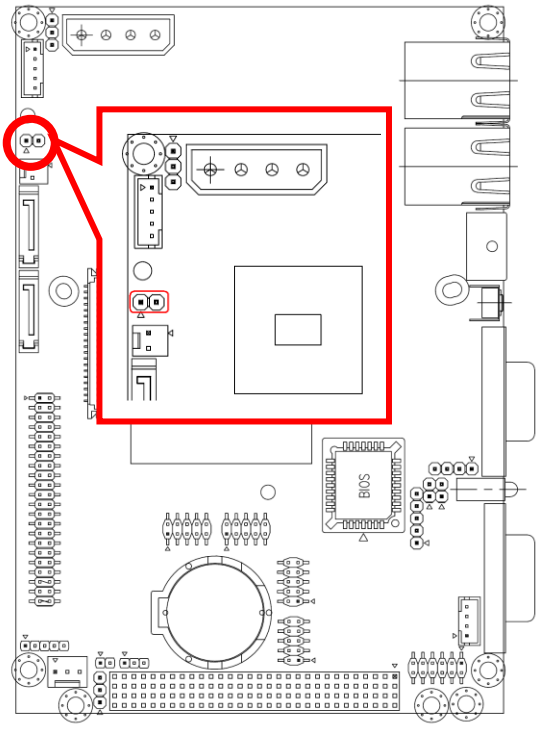
Signal	PIN	PIN	Signal
R_SET#	1	2	GND
PDD7	3	4	PDD8
PDD6	5	6	PDD9
PDD5	7	8	PDD10
PDD4	9	10	PDD11
PDD3	11	12	PDD12
PDD2	13	14	PDD13
PDD1	15	16	PDD14
PDD0	17	18	PDD15
GND	19	20	NC
PDREQ	21	22	GND
PDIOW#	23	24	GND
PDIOR#	25	26	GND
PIORDY	27	28	GND
PDACK#	29	30	GND
IRQ15	31	32	NC
PDA1	33	34	LID
PDA0	35	36	PDA2
PDCS1#	37	38	PDCS3#
HD_LED1	39	40	GND
+5V	41	42	+5V
GND	43	44	NC

2.3.11 LVDS Connector (JLVDS1)



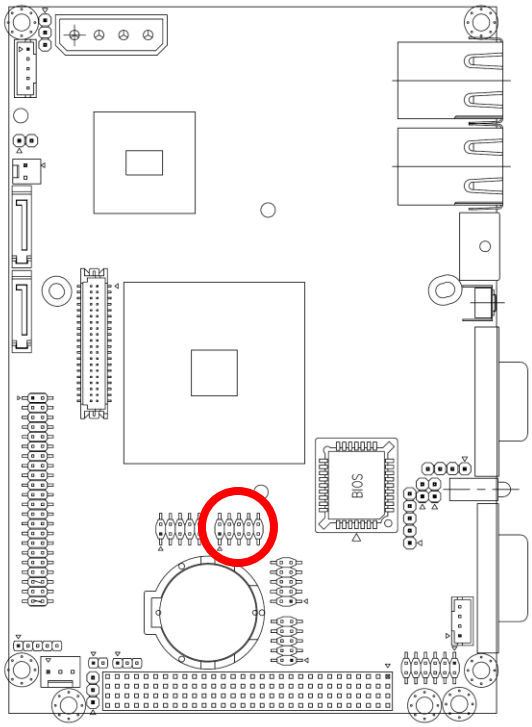
Signal	PIN	PIN	Signal
+5V	2	1	+3.3V
+5V	4	3	+3.3V
I^2C_DAT	6	5	I^2C_CLK
GND	8	7	GND
Txout0	10	9	Txout1
Txout0#	12	11	Txout1#
GND	14	13	GND
Txout2	16	15	Txout3
Txout2#	18	17	Txout3#
GND	20	19	GND
E_Txout0	22	21	E_Txout1
E_Txout0#	24	23	E_Txout1#
GND	26	25	GND
E_Txout2	28	27	E_Txout3
E_Txout2#	30	29	E_Txout3#
GND	32	31	GND
Txclk	34	33	E_Txclk
Txclk#	36	35	E_Txclk#
GND	38	37	GND
DVI/DAT	40	39	DVI/CLK

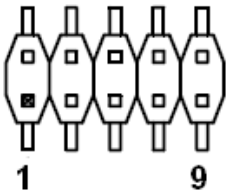
2.3.12 ATX Power Switch Connector (JPS1)



Signal	PIN
GND	2
PW_BN	1

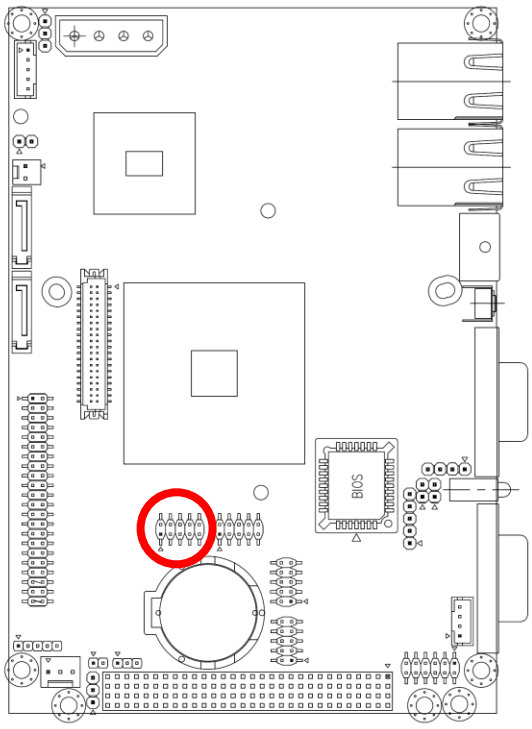
2.3.13 USB Connector 0 & 1 (JUSB1)

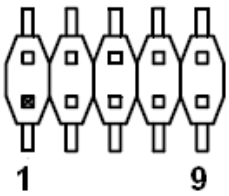




Signal	PIN	PIN	Signal
+5V	1	2	GND
D1-	3	4	GND
D1+	5	6	D0+
GND	7	8	D0-
GND	9	10	+5V

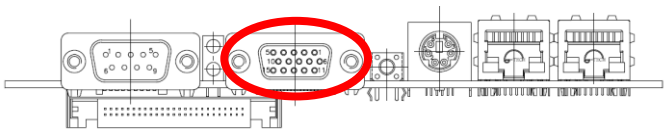
2.3.14 USB Connector 2 & 3 (JUSB2)





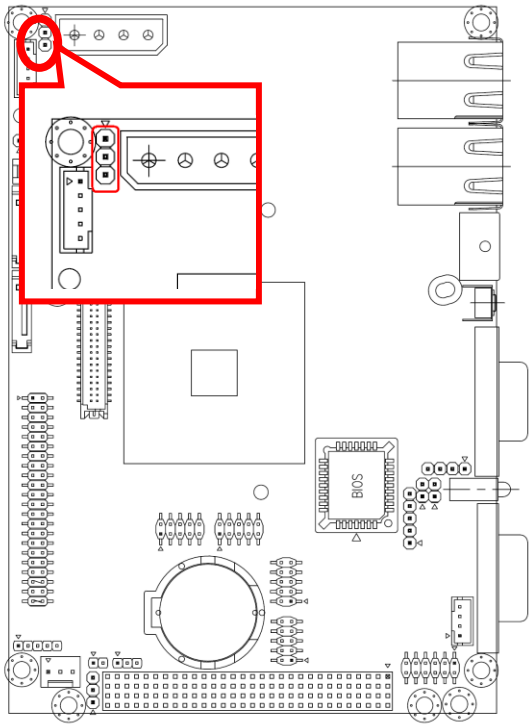
Signal	PIN	PIN	Signal
+5V	1	2	GND
D3-	3	4	GND
D3+	5	6	D2+
GND	7	8	D2-
GND	9	10	+5V

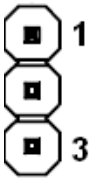
2.3.15 VGA Connector (JVGA1)



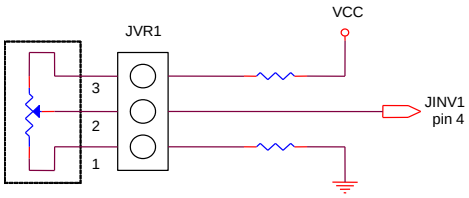
Signal	PIN			Signal
		6		GND
RED	1		11	NC
		7		GND
GREEN	2		12	DAT
		8		GND
BLUE	3		13	HSYNC
		9		VCC
NC	4		14	VSYNC
		10		GND
GND	5		15	DCK

2.3.16 LCD Backlight Brightness Adjustment Connector (JVR1)





Signal	PIN
GND	1
VR	2
+5V	3



Variation Resistor

(Recommended: 4.7KΩ, >1/16W)